

DATA SHEET

CP600 ~ CP6010

SINGLE-PHASE SILICON BRIDGE-P.C. MTG 3A , HEAT-SINK MTG 6A

VOLTAGE 50 to 1000 Volts CURRENT - P.C. MTG 3A , HEAT-SINK MTG 6A



Recognized File # E111753

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O .
- Surge Overload Ratings to 125 Amperes.
- Low forward voltage, and reverse leakage.
- Small size , simple installation.
- Reliable low cost construction utilizing molded plastic technique.

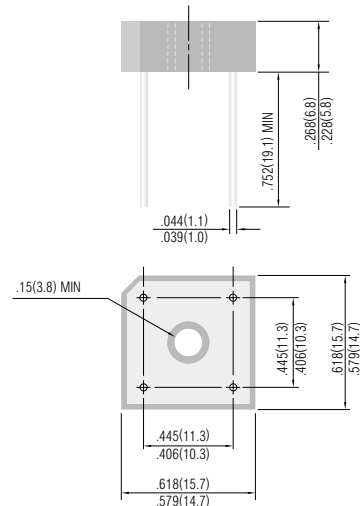
MECHANICAL DATA

Mounting Position: Any

Weight: 0.2 ounce, 5.6 gram

Terminals: Lead solderable per MIL-STD-202 Method 208

Mounting Torque: 5 in. lb. max.



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase , half wave ,60Hz, resistive or inductive load.

For capacitive load , derate current by 20%.

	CP600	CP601	CP602	CP604	CP606	CP608	CP6010	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Bridge input Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	600	1000	V
Maximum Average Forward Current at $T_C=50^{\circ}\text{C}$ See Fig 2 at $T_A=25^{\circ}\text{C}$	6 3							A
Peak Forward Surge Current ,8.3ms single half sine-wave superimposed on rated load	125							A
Maximum Forward Voltage per Bridge Element Specified Current at 3.0A DC & 25°C. See Fig 3	1.1							V
Maximum Reverse Leakage at Rated DC Blocking Voltage per element. at 25°C See Fig 4 at 100°C	10.0 1.0							μA mA
I^2t Rating for fusing ($t < 8.35 \text{ ms}$)	127							A^2S
Typical junction capacitance per leg (NOTE 4) C _J	186							pF
Typical Thermal resistance per leg (NOTE 3) R θ _{JA} Typical Thermal resistance per leg (NOTE 2) R θ _{JC}	22.0 7.3							$^{\circ}\text{C/W}$
Operating Temperature Range T _J	-55 to +125							$^{\circ}\text{C}$
Storage Temperature Range T _A	-55 to +150							$^{\circ}\text{C}$

NOTES:

1. Bolt down on heat-sink with silicon thermal compound between bridge and mounting surface for maximum heat transfer with #6 screw.
2. Unit mounted on 5.0 X 6.0 X 0.11" thick (14 X 15 X 0.3 cm) AL. plate.
3. Unit mounted on P.C.B at 0.395"(9.5mm) lead length with 0.5 X 0.5" (12 X 12 mm) copper pads.
4. Measured at 1.0MHZ and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES

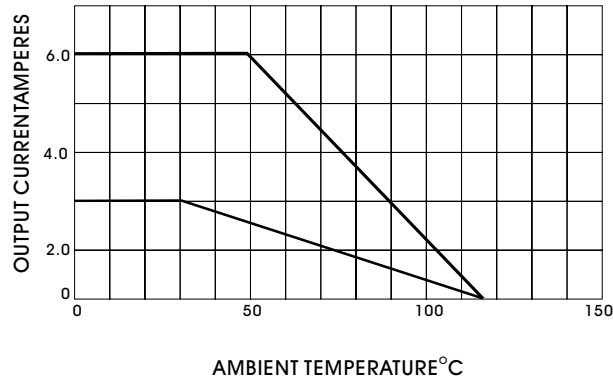


Fig. 1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

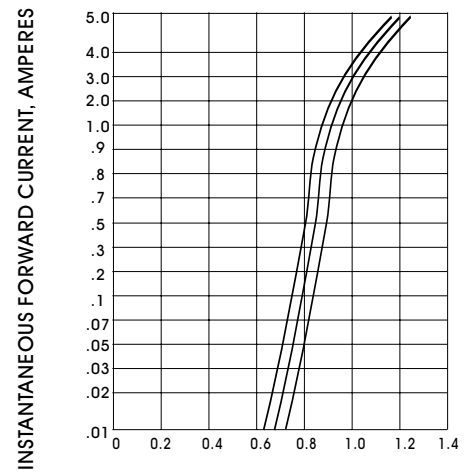


Fig. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS (25°C)

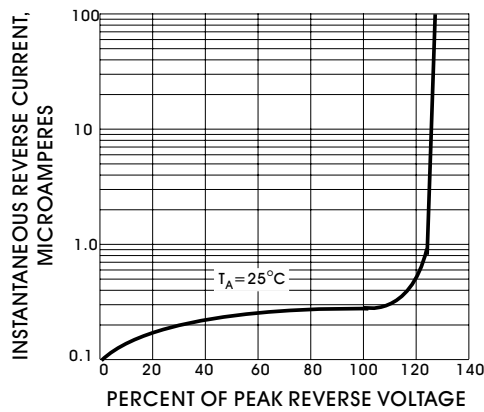


Fig. 3 - TYPICAL PEAK REVERSE CHARACTERISTICS

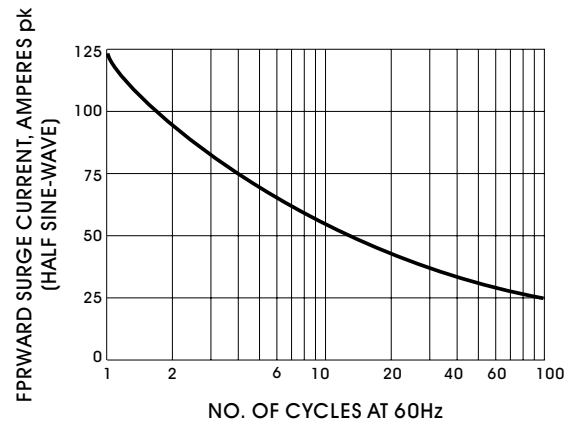


Fig. 4 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT